



# Postgraduate Diploma

## Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine



## Postgraduate Diploma Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-current-management-infectious-pathology-transplantation-intensive-care-medicine](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-current-management-infectious-pathology-transplantation-intensive-care-medicine)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 22*

05

Methodology

---

*p. 28*

06

Certificate

---

*p. 36*

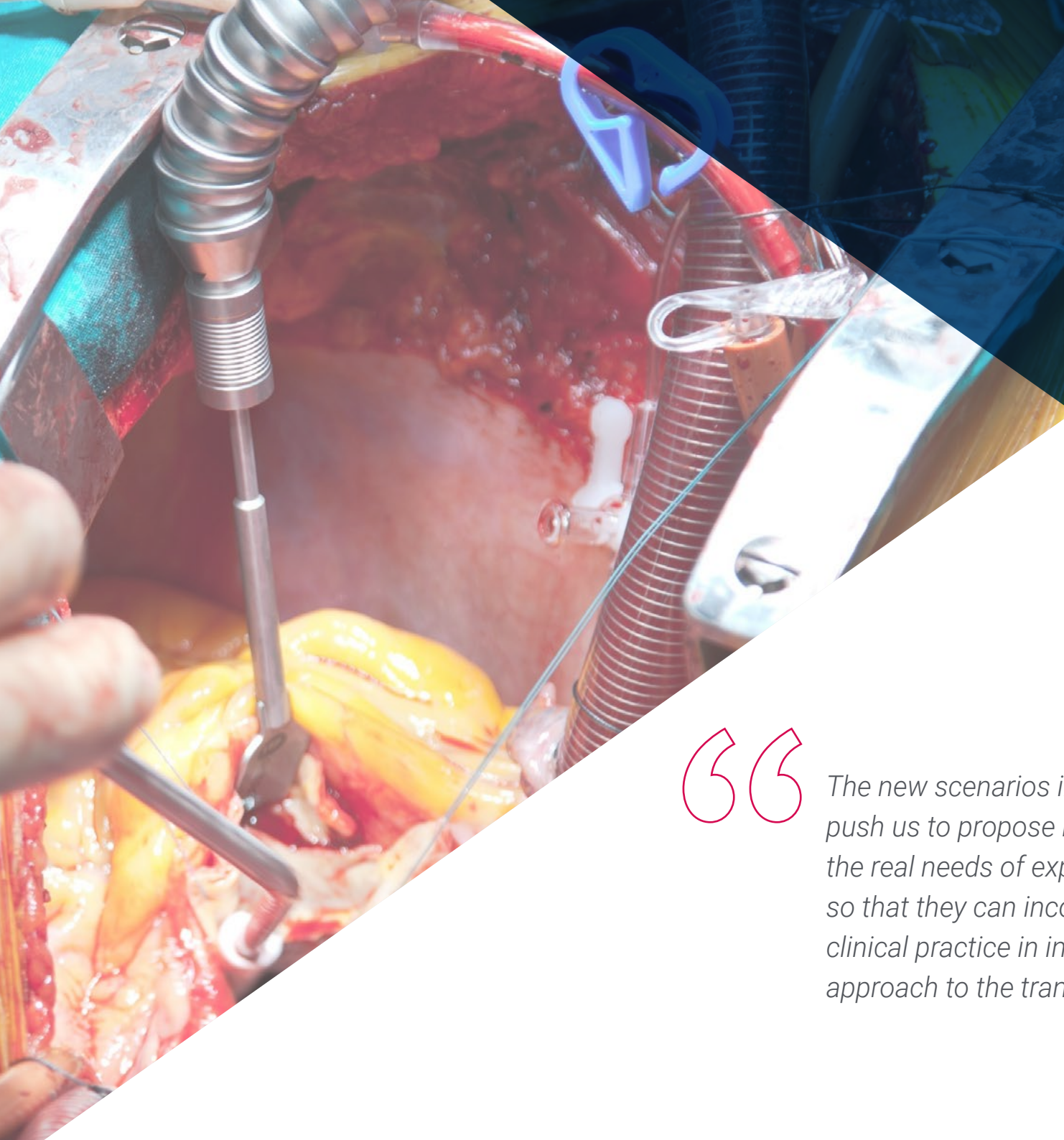
# 01

# Introduction

Infectious pathology and the approach to the transplantation process occur regularly in the ICU. Its complexity and the evolution of diagnostic and therapeutic procedures require constant training for the specialist. This program offers the incorporation of the latest advances in a practical way, so that they can develop their medical practice with quality and safety, improving the prognosis of their patients.







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*The new scenarios in Intensive Care Medicine push us to propose new programs that meet the real needs of experienced professionals, so that they can incorporate the advances in clinical practice in infectious pathology and the approach to the transplanted patient"*

Severe sepsis has a high incidence and remains one of the leading causes of death despite continuous improvements in the care of critically ill patients. The approach to infectious pathology in the critically ill patient is a very important aspect in the daily activity of Intensive Care Medicine, since early diagnosis and treatment leads to a better prognosis in these patients.

On the other hand, the role of Intensive Care Medicine in donation and transplantation programs of the National Transplant Organization is key and decisive. The intensive care physician should always consider the possibility of organ donation for transplantation, and is responsible for the diagnosis of brain death and the decision to withdraw maintenance measures, obtaining consent for donation, supporting the family, and in many cases, immediate care of the transplanted patient.

This Postgraduate Diploma in Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine aims to respond to the specialization needs of the medical specialist, in order to update their knowledge in the approach to critical patients with infectious pathology and in the process of organ donation and transplantation in which they are involved, from the diagnosis of brain death, the evaluation of the potential organ donor, the management of donors in encephalic death and heart failure to the stabilization and postoperative control of cardiac, hepatic and pulmonary transplant recipients.

This **Postgraduate Diploma in Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Clinical cases presented by experts
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Diagnostic and therapeutic developments in the care of patients with gastroesophageal problems
- ♦ Practical workshops on procedures, diagnostic and therapeutic techniques for infectious diseases and guidelines for transplant procedures
- ♦ Video lessons on the different pathologies and their management
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ Includes theoretical lectures, questions to the expert, discussion forums on controversial issues and individual reflection papers
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Scientific evidence increases the quality of medical care. Staying up to date is key to providing better care for patients with infectious pathology and transplantation in the intensive care unit"*

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*This Postgraduate Diploma is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine, you will obtain a certificate issued by TECH Technological University”*

Its teaching staff includes leading intensive care physicians, who contribute their work experience to this program, in addition to other specialists belonging to prestigious scientific societies.

Thanks to its multimedia content developed with the latest educational technology, they will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to prepare in real situations.

This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. This will be done with the help of an innovative system of interactive videos made by recognized experts in Current Management in Infectious Pathology and Transplantation in Intensive Care Medicine who have extensive teaching experience.

*Increase your decision-making confidence by updating your knowledge with this Postgraduate Diploma.*

*Don't miss the opportunity to update your knowledge in the care of patients with Infectious Pathology and Transplantation in the Intensive Care Unit to increase the quality of daily medical care.*





# 02 Objectives

The program is oriented towards a review of the main aspects of the current management of the patient with infectious diseases and transplantation in the Intensive Care Unit, based on scientific evidence and the experience of renowned professionals in the field of critical care.







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*This refresher program will generate a sense of security when practising medicine, which will help you grow both personally and professionally”*



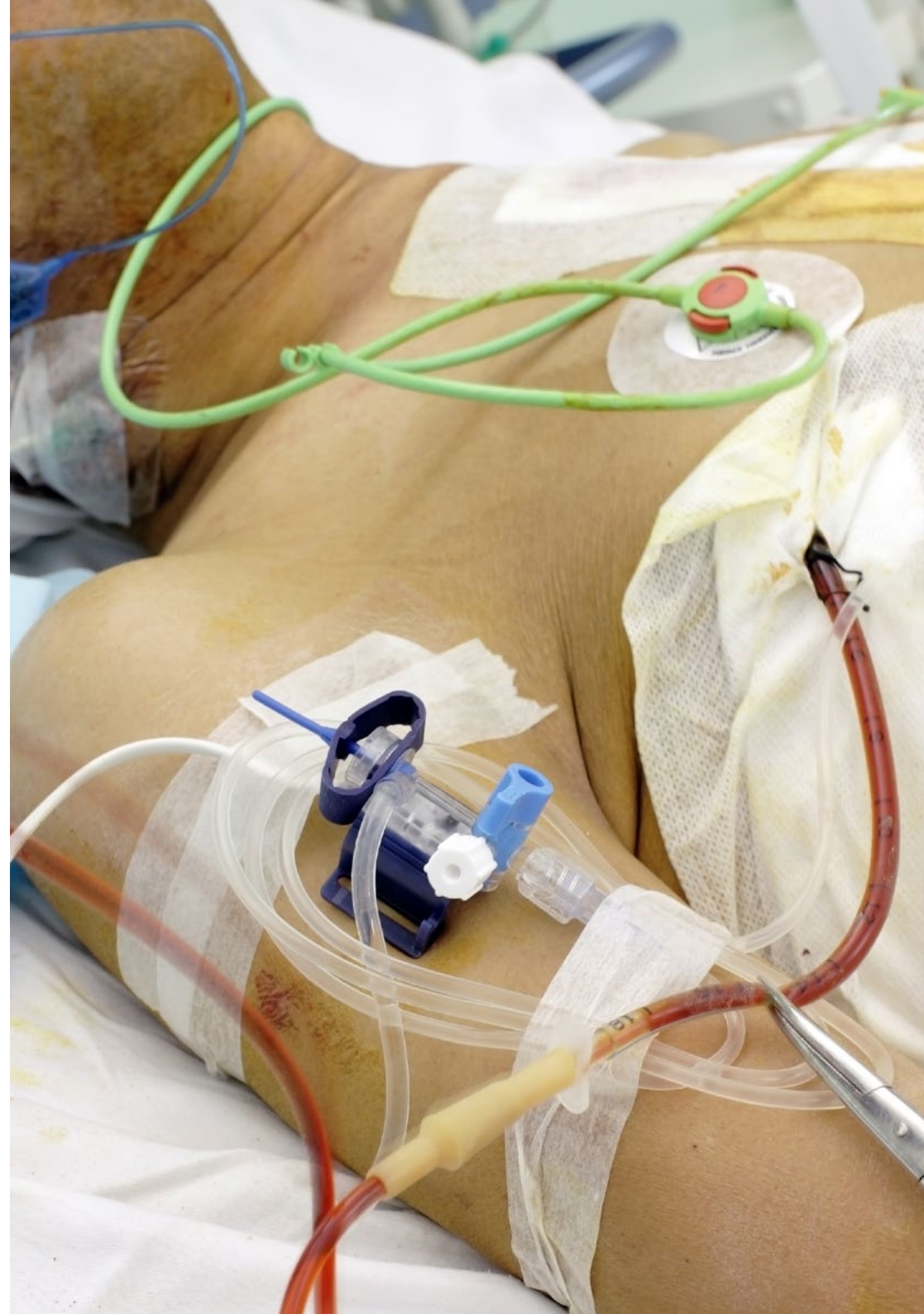
## General Objective

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- Update the knowledge of the specialist physician in the management of the patient with severe infection, with special attention to the case of severe sepsis and the infectious pathologies that most frequently require admission to the Intensive Care Unit, in addition to incorporating the advances in the process of organ donation and transplantation in which the specialist physician in Intensive Care Medicine is involved



*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*





## Specific Objectives

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### Module 1. Management in the Intensive Care Unit

- ♦ Describe a patient safety program
- ♦ Define the usefulness of the electronic medical record in the ICU
- ♦ Explain the ICU without walls project for early detection of patients at risk
- ♦ Update the principles of ICU humanization and incorporate them into daily practice
- ♦ Describe keys to achieving greater quality and excellence in ICU service delivery
- ♦ Identify prognostic indicators in the ICU
- ♦ Point out and incorporate processes to improve communication, relationship and participation in the care of the family of the critically ill patient
- ♦ Explain the different special situations that the intensivist may face in relation to the limitation of therapeutic effort, the decision not to resuscitate or to rule out admission to the ICU

### Module 2. Infectious Pathology in Intensive Care Medicine

- ♦ Update the procedures in the management of severe sepsis
- ♦ Analyze antibiotic policy in the ICU and resistance management
- ♦ Describe bacteremia, catheter sepsis and endocarditis in ICU
- ♦ Analyze the role of procalcitonin in the management of infection in the ICU
- ♦ Point out the key points in the management of fungal infection in the ICU
- ♦ Define severe pneumonia: community-acquired, nosocomial and ventilator-associated
- ♦ Describe the signs and symptoms of meningoencephalitis

### Module 3. Renal Management of the Critically Ill Patient and Organ Donation and Transplantation in Intensive Care Medicine

- ♦ Update in the management procedures for renal management of the critically ill patient
- ♦ Describe the signs and symptoms of Renal Pathology
- ♦ Incorporate up-to-date therapeutic procedures in renal pathology into clinical practice
- ♦ Identify the key points in the use of continuous extrarenal depuration techniques in the ICU
- ♦ Analyze the use of citrate in continuous techniques
- ♦ Describe the process of diagnosing brain death
- ♦ Update in the organ donor management procedures
- ♦ Explain the process of donation to a stopped heart
- ♦ Update in the procedures for the management of heart transplant recipient patients
- ♦ Gain an up-to-date understanding of the procedures for dealing with the recipient of liver transplantation patients
- ♦ Gain an up-to-date understanding of the procedures for dealing with the recipient of lung transplantation patients

# 03

## Course Management

Highly recognized specialists in the field of Intensive Care Medicine have been incorporated to the teaching staff of this program. These professionals perform their medical practice in major hospitals and contribute their work experience to this program. In addition, leading specialists who are members of renowned scientific societies participate in the conception and development of the program. In this way, they channel decades of experience into this program and summarize it in an online learning period of only 6 months.





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*Get up to date on the latest advances in medical procedures for the management of critically ill patients, thanks to instruction from renowned experts"*

## Management



### Dr. Velayos Amo, Carlos

- ♦ Specialist Physician of the Intensive Care Medicine Department at the Fuenlabrada University Hospital
- ♦ Researcher specialized in post-ICU syndrome and patient hospitalization in the HU-CI Project
- ♦ Honorary Professor of the Faculty of Medicine at the Rey Juan Carlos University
- ♦ Degree in Medicine and Surgery at the Autonomous University of Madrid (UAM)
- ♦ Member of: InnoVAHUCI, Itaca Group



### Dr. Álvarez Rodríguez, Joaquín

- ♦ Head of the Intensive Care Medicine Department at the Fuenlabrada University Hospital
- ♦ Transplants Coordinator at the Clinical University Hospital San Carlos
- ♦ Specialist physician in Intensive Care Medicine at the Clinical University Hospital San Carlos
- ♦ Specialist physician in Intensive Care Medicine at the Virgen de la Salud Hospital
- ♦ PhD in Surgery and Medicine from the Complutense University of Madrid
- ♦ Designer of Patient Safety Strategic Plans at the Health Department of the Community of Madrid

## Professors

### Dr. Quintana Díaz, Manuel

- ♦ Secretary of the National Plan of CPR in Critical Medicine and Coronary Units for the Spanish Society of Intensive Care Medicine, SEMICYUC
- ♦ Head of the Emergency Department at la La Paz University Hospital, Madrid
- ♦ PhD in Medicine from the Autonomous University of Madrid
- ♦ Specialist in Internal Medicine at the Soria Hospital Complex
- ♦ Doctor in Medicine with Specialization in Cranioencephalic Trauma and Fractures in the Hemophiliac Patient at the Complutense University of Madrid
- ♦ Physician associated with the Department of Medicine at the Autonomous University of Madrid

### Dr. Palencia Herrejón, Eduardo

- ♦ Head of the Department of Intensive Care Medicine at the Infanta Leonor University Hospital Madrid, Spain
- ♦ Specialist Physician in Intensive Care Medicine at the Complutense University of Madrid
- ♦ Director of the Electronic Journal of Intensive Care Medicine (REMI)
- ♦ Member of the Group of Innovation, Technological Evaluation and Research Methodology (GETMIN) for the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units (SEMICYUC)
- ♦ Associate Professor of the Department of Medicine at the Complutense University of Madrid

### Dr. Álvarez González, Manuel

- ♦ Faculty Specialist at the Clinical Hospital San Carlos
- ♦ Specialist in Intensive Care Medicine
- ♦ Founding Member of the Ecoclub of SOMIAMA
- ♦ Degree in Medicine and Surgery

### Dr. Gordo Vidal, Federico

- ♦ Head of the Intensive Care Medicine Department at the Henares University Hospital
- ♦ Associate Editor-in-Chief of the Journal Medicina Intensiva
- ♦ Author of numerous articles and chapters of specialized books at national and international level
- ♦ Speaker at congresses, round tables and conferences
- ♦ Secretary of the Spanish Society of Intensive Care Medicine
- ♦ PhD in Medicine from the Complutense University of Madrid
- ♦ Member of: ICU Without Walls Project

### Dr. Martín Delgado, María Cruz

- ♦ Head of the Intensive Care Medicine Department at the 12 the Octubre University Hospital
- ♦ Head of the Intensive Care Medicine Department at the Torrejón University Hospital
- ♦ Transplants Coordinator at the Torrejón University Hospital
- ♦ Head of the Intensive Care Medicine Department at HM Nou Delfos Hospital
- ♦ Emergencies Coordinator at the University Hospital of Henares
- ♦ Specialist Physician in Intensive Care Medicine at the Quironsalud San José Hospital
- ♦ Author of more than 80 articles published in national and international journals on Intensive Care Medicine
- ♦ Principal Investigator and Collaborator of more than 50 research studies in the Area of the Critically Ill
- ♦ President of the Pan-American and Iberian Federation of Critical Care Medicine and Intensive Care (FEPIMCTI)
- ♦ President of the Spanish Society of Critical Intensive Care Medicine and Coronary Units (SEMICYUC)

#### Dr. Blesa Malpica, Antonio

- ♦ Head of the Neurotraumatized Section of the Intensive Care Medicine Service at the Clinical University Hospital San Carlos
- ♦ Specialist Physician of the Polytrauma Department at the Clinical Hospital San Carlos
- ♦ Specialist Physician of the Intensive Care Medicine Department at the Santa Ana General Basic Hospital Motril, Spain
- ♦ Interim Adjunct Physician of the ICU at the Clinical University Hospital San Carlos
- ♦ President of the Society of Intensive Care Medicine of the Community of Madrid (SOMIAMA)
- ♦ FCCS Instructor of the American Society of Critical Care Medicine (SCCM)
- ♦ Author of numerous specialized publications at national and international level
- ♦ PhD in Surgery from the Complutense University of Madrid
- ♦ Master's Degree in Health Services and Health Companies Management by the Complutense University of Madrid
- ♦ Member of: Clinical Commissions of Transfusions, Nutrition and Pharmacy at the San Carlos Clinical Hospital, Polytraumatized Committee at the San Carlos Clinical Hospital, Spanish Society of Intensive and Critical Care Medicine and Coronary Units in the Metabolism and Nutrition Group, European Society of Intensive Care, Spanish Society of Parenteral and Enteral Nutrition, European Society of Parenteral and Enteral Nutrition

#### Dr. Martín Benítez, Juan Carlos

- ♦ Specialized Physician in Intensive Care Medicine at the Clinical University Hospital San Carlos
- ♦ Co-author of the scientific article Glycemia in the first 24 hours is not a prognostic factor for mortality in critically ill patients
- ♦ Co-author of Clinical Practice Guidelines for the management of low cardiac output syndrome in postoperative cardiac surgery

#### Dr. Lorente Balanza, José Ángel

- ♦ Head of Intensive Care Medicine at the University Hospital of Getafe Spain
- ♦ Member of the Foundation for Biomedical Research at the University Hospital of Getafe
- ♦ Academic Jury in the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units (SEMICYUC), Professional of the Critically Ill Patient
- ♦ Author of articles in the scientific journal *Avances terapéuticos en el shock séptico*, Dialnet. Unirioja

#### Dr. Chico Fernández, Mario

- ♦ Head of Trauma and Emergency ICU Department at the 12 de Octubre University Hospital, Madrid
- ♦ Specialist in Intensive Care Medicine at the 12 de Octubre University Hospital, Madrid
- ♦ Doctor from the Autonomous University of Madrid with the thesis: *Development and improvement of a communication tool for patient safety in a trauma and emergency ICU Safety Briefing*
- ♦ Co-author of the following scientific articles: Coagulopathies of trauma, Buffered versus 0.9% saline solution in critically ill adults and children, Risk factors and protection of secondary traumatic stress in intensive care

#### Dr. Abella Álvarez, Ana

- ♦ Specialized Physician in Intensive Care Medicine at the University Hospital of Henares
- ♦ Degree in Medicine and Surgery at the University of Valladolid
- ♦ On-call service in the Intensive Care ward at the University Hospital of Getafe
- ♦ Resident tutor at the University Hospital of Henares



**Dr. Alonso Ovies, Ángela**

- ♦ Specialized Physician in Intensive Care Medicine at the Fuenlabrada University Hospital
- ♦ Specialized Physician in Intensive Care Medicine at the Clinical Hospital San Carlos
- ♦ Specialized Physician in Intensive Care Medicine at the Nuestra Señora del Rosario Sanatorium
- ♦ Master's Degree in Patient Safety and Quality of Care from the Miguel Hernández University of Elche
- ♦ Member of: Executive Committee of the Communication Research Area of the HU-CI Project, Editorial Committee of the Journal Medicina Intensiva, Intensive Care Medicine Society of the Community of Madrid (SOMIAMA)

**Dr. Álvarez Fernández, Jesús Andrés**

- ♦ Head Physician at the Juaneda Miramar Hospital
- ♦ Specialist in Intensive Care Medicine and Burn Patient Management at the University Hospital of Getafe
- ♦ Associate Researcher of the Neurochemistry and Neuroimaging Department at the University of La Laguna

**Dr. Balandín Moreno, Bárbara**

- ♦ Specialized Physician in Intensive Care Medicine
- ♦ Specialized Physician in the Intensive Care Medicine Service at the Puerta De Hierro University Hospital, Majadahonda
- ♦ Co-author of articles published in scientific journals
- ♦ Contributor to collective scientific works

**Dr. Conesa Gil, Juan**

- ♦ Specialized Physician in Intensive Care Medicine at the Ruber International Hospital
- ♦ Entrepreneur in Jac Intensiva SL

**Dr. Bueno García, Begoña**

- ♦ Attending Physician of the Department of Intensive Care Medicine at the Infanta Leonor University Hospital Madrid
- ♦ Master's Degree in Medical Expertise and Assessment of Bodily Injury
- ♦ Collaborator of the 50th National Congress of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units Madrid

**Dr. Calvo Herranz, Enrique**

- ♦ Attending Physician at the Getafe University Hospital
- ♦ Intensive Care Physician at the University Hospital del Henares
- ♦ Invited doctor to the IV Symposium on the Critically Ill Burned Patient
- ♦ Speaker at the following courses: II Course on ABIQ Instructors, III Course on Basic Initial Care of the Burned Patient (ABIQ)

**Dr. Catalán González, Mercedes**

- ♦ Head Section of the Intensive Care Medicine Department at the 12 de Octubre University Hospital
- ♦ Attending Physician of the Department of Intensive Care Medicine at the 12 de Octubre University Hospital
- ♦ Specialized Physician in Intensive Care Medicine
- ♦ Specialized Physician in Clinical Pharmacology
- ♦ Doctor of Medicine
- ♦ Associate Professor of the Faculty of Medicine at the Complutense University of Madrid

#### **Dr. De la Torre Ramos, María Ángeles**

- ♦ Specialist in Intensive Care Medicine at the University Hospital of Fuenlabrada Madrid
- ♦ Post Intensive Care Follow-Up Consultation. InnovaHUCI Project at the University Hospital of Fuenlabrada
- ♦ Specialist in Intensive Care Medicine at the HLA University Hospital Moncloa
- ♦ Degree in Medicine and Surgery from the University of Zaragoza
- ♦ Advanced Studies Diploma from the Complutense University of Madrid

#### **Dr. Muñoz González, Javier**

- ♦ Head of the Critical Care Research Group at the Gregorio Marañón Health Research Institute
- ♦ Medical Director at the Gregorio Marañón General University Hospital
- ♦ Head of the ICU Section at the General University Hospital Gregorio Marañón
- ♦ Head of the Emergency Department at the General University Hospital Gregorio Marañón
- ♦ Assistant Physician of the Intensive Care Medicine Department at the University General Hospital Gregorio Marañón
- ♦ Deputy Medical Director at the University General Hospital Gregorio Marañón
- ♦ PhD in Medicine from the Complutense University of Madrid

#### **Dr. Del Castillo Arrojo, Silvia**

- ♦ Assistant Physician of the Cardiology Service at the University Hospital of Fuenlabrada
- ♦ Specialized Physician in Cardiology at the Jiménez Díaz Foundation University Hospital
- ♦ Head of the Arrhythmia Unit at the Germans Trias i Pujol Hospital
- ♦ Research at University Hospital of Pennsylvania
- ♦ Degree in Medicine and Surgery from the Autonomous University of Madrid
- ♦ Master's Degree in Clinical Electrophysiology, Complutense University of Madrid

#### **Dr. Díaz-Alersi Rosety, Ramón**

- ♦ Specialized Physician in Intensive Care Medicine
- ♦ Area Specialist of the Intensive Care Medicine Department at the Puerto Real University Hospital
- ♦ Co-author of the article *Systematic review and meta-analysis of interleukin-6 inhibitors to reduce mortality in hospitalized patients with COVID-19*

#### **Dr. Gómez García, José Manuel**

- ♦ Specialist in Intensive Care Medicine at the Gregorio Marañón Hospital
- ♦ Physician of the Professional Burnout Area, HU-CI Project Spain
- ♦ Attending Physician in the Intensive Care Medicine Sector at HM Torrelodones Hospital
- ♦ Professor and Coordinator of Ethics and Health Care Communication at CEU San Pablo University

#### **Dr. Graupner Abad, Catherine**

- ♦ Cardiologist at the University Hospital of Fuenlabrada Madrid
- ♦ Member of the Spanish Society of Cardiology
- ♦ Speaker at the SEC21 Congress on Cardiovascular Health Zaragoza, Spain

#### **Dr. Gutiérrez Rodríguez, Julián**

- ♦ Specialized Physician in the Department of Intensive Care Medicine at the 12 de Octubre University Hospital
- ♦ Advanced Life Support Instructor in the National Cardiopulmonary Resuscitation Plan of SEMICYUC
- ♦ Member of: 12 de Octubre University Hospital Mortality Clinical Commission

**Dr. Martínez-Hurtado, Eugenio**

- ♦ Specialized Physician of the Anesthesiology and Resuscitation Service at the Infanta Leonor University Hospital Madrid
- ♦ Medical Captain in the Spanish Ministry of Defense
- ♦ Medical Specialist in Anesthesiology, Resuscitation and Pain Therapy at Quirónsalud Hospital Group
- ♦ Specialized Physician in Anesthesia, Resuscitation and Pain Therapy at the University Hospital of Torrejón
- ♦ Instructor in Airway Management
- ♦ Medical Specialist in the Humanitarian Aid Surgical Campaign at the Hôpital Auberge de l'Amour Rédempteur. Africa
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Master's Degree in Prevention Management in the Company by the European Institute of Health and Social Welfare
- ♦ Master's Degree in Social and Preventive Pediatrics from the University of Las Palmas de Gran Canaria
- ♦ Member of: AnesthesiaR, EC Anaesthesia, Difficult Airway Working Group of the Spanish Society of Anesthesiology, Resuscitation and Pain Therapy of Madrid

**Dr. Jaspe Codeciso, Alexis**

- ♦ Attending Physician of the Intensive Care Unit at the Gregorio Marañón General University Hospital Madrid, Spain
- ♦ Emergency Physician in Internal Medicine at El Avila Clinic Caracas, Venezuela
- ♦ Medical Intern at the Vargas Hospital of Caracas. Caracas, Venezuela
- ♦ Physician and Surgeon by the Faculty of Medicine at the Central University of Venezuela

**Dr. Heras La Calle, Gabriel**

- ♦ Creator and Director of the HU-CI Project, Humanizing Intensive Care
- ♦ Director of the Humanization Committee of the Pan-American and Iberian Federation of Critical Care Medicine and Intensive Care (FEPIMCTI)
- ♦ Head of Service of the Clinical Management Unit of Intensive Care Medicine of the Southern Area of Granada at the Regional Hospital Santa Ana de Motril
- ♦ Specialist in Intensive Care Medicine at Severo Ochoa, La Paz, Alcorcón Foundation, HM Torrelodones, Son Llätzer, Infanta Leonor and Torrejón University Hospitals
- ♦ Degree in Medicine and Surgery from the University of Alcalá de Henares

**Dr. Morales Sorribas, Eduardo**

- ♦ Attending Physician of the ICU at the Ramón y Cajal University Hospital
- ♦ Specialist in Intensive Care Medicine at the Sanitas La Moraleja University Hospital
- ♦ Attending Physician Specialist in Cardiovascular Critical Care at the Clinical Hospital San Carlos
- ♦ Specialized Physician in Intensive Care Medicine at the Los Madroños Hospital
- ♦ Attending Physician in Intensive Care Medicine at the Jiménez Díaz Foundation University Hospital. University teaching collaborator
- ♦ Master's Degree in Clinical Management, Medical and Healthcare Management at CEU Cardenal Herrera University

**Dr. Nieto Cabrera, Mercedes**

- ♦ Specialized Physician in Intensive Care Medicine at the Ruber International Hospital
- ♦ Specialized Physician in Intensive Care Medicine at the Clinical Hospital San Carlos
- ♦ PhD in Medicine from the Complutense University of Madrid

# 04

## Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in good medical practice in intensive care units, aware of the current relevance of specialization in order to be able to act in severe trauma patients and committed to quality teaching through new educational technologies.





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*This Postgraduate Diploma in Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine contains the most complete and up-to-date scientific program on the market"*

## Module 1. Management in the Intensive Care Unit

- 1.1. Patient Safety
  - 1.1.1. Concept
  - 1.1.2. Evolution of Patient Safety
  - 1.1.3. Medical Errors
  - 1.1.4. Various Definitions
  - 1.1.5. Security Culture
  - 1.1.6. Risk Management
  - 1.1.7. Where Are We?
  - 1.1.8. Patient Safety in Intensive Care Units
- 1.2. Information Systems
- 1.3. ICU Without Walls
  - 1.3.1. Problem: Why Did the ICU Without Walls Model Emerge?
  - 1.3.2. Solution: Early Detection of Severity
  - 1.3.3. ICU Without Walls Project
- 1.4. Humanization in the Care of Critically Ill Patients
  - 1.4.1. Introduction. HU-CI Project
  - 1.4.2. Involvement of Family Members in the Care and Presence in Certain Proceedings
  - 1.4.3. Perceived Quality. Satisfaction Surveys
  - 1.4.4. Communication Between Professionals
  - 1.4.5. Professional Needs. Professional Burnout
  - 1.4.6. Post-ICU Syndrome. Psychological Results
  - 1.4.7. Humanized Architecture
- 1.5. Quality and Excellence in the ICU
  - 1.5.1. Quality Models
  - 1.5.2. EFQM Excellence Model
  - 1.5.3. Quality Group in the ICU
- 1.6. Prognosis in ICU
  - 1.6.1. History of Severity Scales
  - 1.6.2. Prognosis Scales
  - 1.6.3. Comparison of Scales
  - 1.6.4. Unresolved Issues
- 1.7. The Family of the Critically Ill Patient
  - 1.7.1. Communicating Bad News
  - 1.7.2. Family in the ICU
  - 1.7.3. Participation in Care
- 1.8. Open Door ICU
  - 1.8.1. Family, Relatives and Visitors
  - 1.8.2. About the Visits and their Organization
  - 1.8.3. Why Are they Organized this Way?
  - 1.8.4. What Do Patients and Families Want?
  - 1.8.5. Is a Change Possible?
  - 1.8.6. Proposals for the Future
- 1.9. The ICU at the End of Life
  - 1.9.1. Ethical Principles of Limitation of Life-Sustaining Treatments (LST)
  - 1.9.2. Limitation of Life-Sustaining Treatments and Patient's Autonomy
  - 1.9.3. Decision-Making Process at Limitation of LST
  - 1.9.4. Palliative Care Plan
  - 1.9.5. Conflict Management
  - 1.9.6. Support to Professionals
  - 1.9.7. Decision Not to Resuscitate
  - 1.9.8. Organ Donation Considerations
  - 1.9.9. Rule Out ICU Admission
- 1.10. Mortality Stratification Systems in the ICU

**Module 2. Infectious Pathology in Intensive Care Medicine**

- 2.1. Current Management of Sepsis
  - 2.1.1. Definitions of Sepsis
  - 2.1.2. Septic Shock
  - 2.1.3. Epidemiology of Sepsis
  - 2.1.4. Surviving Sepsis Campaign
  - 2.1.5. Sepsis Code
  - 2.1.6. Treatment of Sepsis
  - 2.1.7. Diagnosis and Treatment of Infection
- 2.2. Antibiotherapy in Intensive Care Units
  - 2.2.1. Impact of Antibiotic Use
  - 2.2.2. Antibiotic Use Policy at the Individual Level
  - 2.2.3. Quality Indicators
  - 2.2.4. Resistance Management
  - 2.2.5. Zero Resistance Project
- 2.3. Severe Abdominal Infections in ICU
  - 2.3.1. Acute Abdomen and Peritonitis
  - 2.3.2. Infectious Complications in the Abdominal Postoperative Period
  - 2.3.3. Tertiary Peritonitis
- 2.4. Intravascular Infections in the ICU
  - 2.4.1. Bacteremia
  - 2.4.2. Catheter-Related Bacteremia
  - 2.4.3. Long-Term Central Venous Catheter-Related Infections
  - 2.4.4. Infections Related to Cardiac Devices: Pacemakers and Defibrillators
  - 2.4.5. Antibiotic Treatment
- 2.5. Procalcitonin as a Marker of Sepsis
- 2.6. Key Points in the Management of Invasive Fungal Infection in the ICU
  - 2.6.1. Filamentous Hyphae
  - 2.6.2. Invasive Aspergillosis (IA)
  - 2.6.3. Mucormycosis
  - 2.6.4. Other Filamentous Fungi
  - 2.6.5. Yeast
  - 2.6.6. Invasive Candidiasis (IC)
  - 2.6.7. Cryptococcosis
- 2.7. Severe Pneumonia
- 2.8. Bacterial Meningitis, Viral Encephalitis and Other Encephalitis
  - 2.8.1. Bacterial Meningitis. Key Management Points
  - 2.8.2. Viral Encephalitis and Other Encephalitis
- 2.9. Endocarditis
  - 2.9.1. Classification and Definitions in Infective Endocarditis
  - 2.9.2. Diagnosis
  - 2.9.3. Modified Duke Criteria
  - 2.9.4. Clinical Manifestations of Infective Endocarditis
  - 2.9.5. Etiology of Infective Endocarditis
  - 2.9.6. Microbiological Diagnosis
  - 2.9.7. Echocardiographic Diagnosis
  - 2.9.8. Treatment
- 2.10. Multiresistant Bacteria
  - 2.10.1. The Challenge of Multidrug-Resistant Microorganisms
  - 2.10.2. Resistances of Gram-Positive Bacteria
  - 2.10.3. Resistances of Gram-Negative Bacteria

**Module 3.** Renal Management of the Critically Ill Patient and Organ Donation and Transplantation in Intensive Care Medicine

- 3.1. Key Points in the Use of Continuous Extrarenal Clearance Techniques in the ICU
  - 3.1.1. Acute Renal Failure in the ICU
  - 3.1.2. Continuous Renal Replacement Techniques (CRRT)
  - 3.1.3. Indications for CRRT
  - 3.1.4. Selection of Extrarenal Depuration Modality
  - 3.1.5. Dose
  - 3.1.6. Anticoagulation
  - 3.1.7. Technique and Materials
- 3.2. Anticoagulation with Citrate in Continuous Extrarenal Clearance Techniques
  - 3.2.1. Indications for Citrate Anticoagulation
  - 3.2.2. Contraindications for Citrate Anticoagulation
  - 3.2.3. Metabolic Aspects of Regional Anticoagulation with Citrate
  - 3.2.4. Diagram of Calcium Contents and Ci-Ca Complexes Along the Extracorporeal and Blood Circuit
  - 3.2.5. Dialysis Liquids
  - 3.2.6. Indicative Initial Treatments
  - 3.2.7. Anticoagulation and Calcium Replenishment Controls
  - 3.2.8. Acid-Base Balance Controls
  - 3.2.9. Recommended Laboratory Tests for Citrate Treatment
- 3.3. Diagnosis of Brain Death
- 3.4. Current Management of the Organ Donor
- 3.5. Non-Heart-Beating Donation
- 3.6. Management of the Cardiac Transplant Recipient Patient
- 3.7. Management of the Liver Transplant Recipient Patient
- 3.8. Management of the Lung Transplant Recipient Patient
- 3.9. Key Points in the Use of Continuous Extrarenal Clearance Techniques in the ICU







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*A unique, key, and decisive educational experience to boost your professional development”*

# 05 Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*



## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.





## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.





# 06 Certificate

The Postgraduate Diploma in Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.





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*Successfully complete this program  
and receive your university qualification  
without having to travel or fill out  
laborious paperwork”*

This **Postgraduate Diploma in Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine**

Official N° of hours: **500 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom



## Postgraduate Diploma

Current Management  
of Infectious Pathology  
and Transplantation in  
Intensive Care Medicine

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Diploma

## Current Management of Infectious Pathology and Transplantation in Intensive Care Medicine

